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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,684	04/25/2005	Jorg Mayer	FRG-15998	7308
40854 7590 02/20/2009 RANKIN, HILL, & CLARK LLP 38210 Glenn Avenue WILLOUGHBY, OH 44094-7808				
EXAMINER				
BALLINGER, MICHAEL ROBERT				
ART UNIT		PAPER NUMBER		
3732				
MAIL DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/530,684

**Applicant(s)**

MAYER ET AL.

**Examiner**

MICHAEL R. BALLINGER

**Art Unit**

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-26 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 07 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-850)  
Paper No(s)/Mail Date 4/27/05, 10/3/05, 9/12/07  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. In acknowledgement of the amendments filed 22 December 2008, claims 1-26 are pending claims 26-45 are canceled.

***Election/Restrictions***

2. Claims 27-45 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions II-IV, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 22 December 2008.

***Specification***

3. The use of the trademarks "Resomer LR708" and "Resomer R208" has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology (e.g. RESOMER LR708 <sup>TM</sup>).
4. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 recites the limitation "wherein an implant portion to be implanted comprises surface ranges" on lines 3-4. It is unclear to the Examiner if and/or how the "implant portion" structurally relates to the "bone implant" recited in line 1 of the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-19 and 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Aeschlimann et al. (WO/02069817 A1, an English language translation of the specification has been included with this office action).

10. Per claim 1, figures 20-22 of Aeschlimann teaches a bone implant (i.e. implant 7) suitable for implantation in an implantation direction parallel to an implant axis in a cavity surrounded by a cavity wall of bone tissue (i.e. jawbone, 32), an implant portion including surface ranges (i.e. cylindrical piece, 44) of a material that is liquefiable by mechanical oscillation (page 18, lines 11-16 of translation) or the surface ranges (44) formed by pressing the liquefiable material out of a hollow space (i.e. porous sleeve material, page 18, line 14) and the implant portion includes cutting edges (as illustrated below), the cutting edges are located outside the surface ranges (44), the cutting edges do not extend in a common plane with the implant axis, face towards the distal end region of the implant and extend partly around the circumference of the implant.

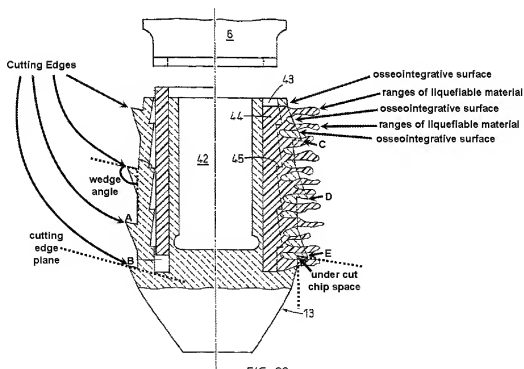
11. Per claims 2-4, Aeschlimann teaches the cutting edges have a wedge angle of less than 90 degrees (i.e. cutting edges on the right side of figure 22), are salient (i.e. cutting edges on the left side of figure 22 are jetting upward) and are under cut to form a chip space (as illustrated below).
12. Per claims 6 and 7, figure 8 of Aeschlimann teaches openings (i.e. the openings in sleeve, 13) leading into depressions (i.e. the openings are depressed into the sleeve) and the depressions are grooves extending axially (i.e. top to bottom of figure 8) in the implant region.
13. Per claim 8, figure 22 teaches osseointegrative surfaces are situated between the surface ranges of the liquefiable material (as illustrated below).
14. Per claims 10 and 13 figure 22 clearly indicates the cutting edges extending along parts of the circumference of the implant forming lower edges of scale like structure and the implant tapering towards a distal end.
15. Per claim 12, figure 22 teaches the proximal end region includes a ring (i.e. top portion of cylindrical piece, 44) of thermoplastic material (i.e. polyester, page 12, lines 30-31 as the liquefiable material).
16. Per claim 14 and 15, figure 22 of Aeschlimann teaches the implant including steps with cutting edges, the steps having edges with wedge angles of 90 degrees or more (as illustrated below). Also, per claim 16, Aeschlimann teaches the implant has an essentially cylindrical from and cutting edges protruding from the implant and being distanced from the implant axis by distances which decrease in the direct of the implantation (i.e. cutting edge A is further from the implant axis than cutting edge B as illustrated below).
17. Per claim 17 figure 22 of Aeschlimann illustrates the cutting edges are aligned in series in the axial direction (i.e. cutting edges C-D-E as illustrated below). Furthermore, per claim 18,

figure 22 teaches two series of cutting edges (i.e. C-D-E as illustrated below) facing each other, and surface ranges of liquefiable material are situated between the series on the implant structure (illustrated below).

18. Per claim 19, Aeschlimann teaches a hollow space (42: figure 22) and a piston (i.e. bottom cylindrical portion of artificial tooth, 42 shown in figure 20).

19. Per claims 21-23 , figure 20 of Aeschlimann teaches the implant is a dental implant which carries an intermediate element (i.e. artificial tooth, 40) and the intermediate element is connected by a loose fit connection ( page 17, lines 27-34).

20. Per claim 24, Aeschlimann teaches means for fastening an abutment, a crown, a bridge or a set of dentures (page 17, lines 29-30). Per claims 25 and 26, figure 27 of Aeschlimann teaches the implant is a shaft which is adapted to bridge a bone defect.



***Claim Rejections - 35 USC § 103***

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aeschlimann et al. (WO/02069817 A1) in view of Lazarof (U.S. 6,142,782)

23. The Examiner notes the claim includes claim element “means for an insulating connection”, is a means plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. The written description discloses this “means” as “the piston is equipped with finely pitched thread 44, when pushed into the hollow space, 26 is cold-welded to the wall of the hollow space”. Therefore, the Examiner has interpreted this limitation as threading which when compressed creates a cold welding between the piston and implant and equivalents. Aeschlimann et al. fails to explicitly disclose this limitation; however, Lazarof teaches a piston (i.e. draw screw, 80) including a threaded portion (i.e. threaded shank, 86) which when compressed into the implant (60) causes a cold welding connection (column 7, lines 42-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time then invention was made to modify the piston-implant connection of Aeschlimann to include the threaded cold-welding connection of Lazarof, in order to prevent harmful bacteria from entering the internal hollow of the implant.

***Conclusion***

24. Included with this office action is an English language translation of the Aeschlimann et al. (WO/02069817 A1) reference relied upon in this rejection. All page and line number referred to in the above rejections correlate to this English language translation.
25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Shirkhanzadeh (U.S. 5,383,935) and Lin et al. (U.S. 6,916,177).
26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL R. BALLINGER whose telephone number is (571)270-5567. The examiner can normally be reached on Monday-Friday 7:30 A.M to 5:00 P.M. EST.
27. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571)272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
28. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Ballinger/  
Examiner, Art Unit 3732  
2/13/09

/Cris L. Rodriguez/  
Supervisory Patent Examiner, Art Unit 3732